IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
WACO DIVISION

WSOU INVESTMENTS LLC,	§	
Plaintiff	§	
	§	
	§	**W-20-CV-01012-ADA**
-v-	§	**W-20-CV-01017-ADA**
	§	**W-20-CV-01018-ADA**
TP-LINK TECHNOLOGY CO., LTD.,	§	**W-20-CV-01022-ADA**
Defendants	§	
	§	

CLAIM CONSTRUCTION ORDER

The Court held a *Markman* hearing on January 7, 2022. During that hearing, the Court

provided its final constructions. The Court now enters those claim constructions.

SIGNED this 7th day of January, 2022.

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ALAN D ALBRIGHT
UNITED STATES DISTRICT JUDGE

Term	Plaintiff's Proposed Construction	Defendants' Proposed Construction	Court's Preliminary Construction

| "a processor for assigning scheduling priorities to each mobile unit"

U.S. Patent No. 7,174,180, Cls. 1, 11, and 13 | 35 U.S.C. § 112, ¶ 6 applies

Function: assigning scheduling priorities to each mobile unit

Structure:
Determining the sensitivity to delay of one or more data streams serving the mobile unit and the delay currently experienced by the one or more data streams serving the mobile unit, Computing the data stream urgency value for each data stream serving each mobile unit based on (i) the sensitivity to delay of the data stream and (ii) the delay currently experienced by the data stream, Assigning the unit urgency value to the mobile unit, with the unit urgency value being the highest data stream urgency value for the data streams serving the mobile unit, and Scheduling priority for the mobile unit based on the unit urgency value for the mobile unit | 35 U.S.C. § 112, ¶ 6 applies

Functions:
computing a data stream urgency value for each data stream serving each mobile unit, wherein the data stream urgency value for a data stream is computed based on the sensitivity to delay of the data stream and the delay currently experienced by the data stream assigning a unit urgency value to the mobile unit, the unit urgency value being the highest data stream urgency value for the data streams serving the mobile unit
calculating the scheduling priority for the mobile unit based on the unit urgency value for the mobile unit
assigning scheduling priorities to each mobile unit
Structure: Insufficient structure (no algorithm); indefinite | 35 U.S.C. § 112, ¶ 6 does not apply. Plain-and-ordinary meaning. |

"a priority computation module" U.S. Patent No. 7,174,180, Cls. 14, 15, and 17	Plain and ordinary meaning Alternatively, if the Court finds that 35 U.S.C. 112, ¶ 6 applies: Function: examining the status information and the unit parameters for each mobile unit and to assign a scheduling priority to each mobile unit Structure: a software module running on a processor with the following algorithm: • Compute an urgency value for each data stream serving each mobile unit, the data stream urgency value for a data stream being computed based on the sensitivity to delay of the data stream and the delay currently experienced by the data stream • Assign a unit urgency value to the mobile unit, the unit urgency value being the highest data stream urgency value for	35 U.S.C. § 112, ¶6 applies Functions: • computing a data stream urgency value for each data stream serving each mobile unit, wherein the data stream urgency value for a data stream is computed based on the sensitivity to delay of the data stream and the delay currently experienced by the data stream • assigning a unit urgency value to the mobile unit, the unit urgency value being the highest data stream urgency value for the data streams serving the mobile unit calculating the scheduling priority for the mobile unit based on the unit urgency value for the mobile unit • examining the status information and the unit parameters for each mobile unit • assigning scheduling priorities to each mobile unit	35 U.S.C. § 112, ¶ 6 does not apply. Plain-and-ordinary meaning.

| | the data streams serving the mobile unit
• Compute the scheduling priority for the mobile unit based on the unit urgency value for the mobile unit | Structure: Insufficient structure (no algorithm); indefinite.

Alternatively, if the Court finds that the specification discloses an algorithm, then the structure should be limited to equations (1), (7), and (8) | |

| "rate control engine configured to . . ."

U.S. Patent No. 7,652,988, Cls. 1, 12, and 24 | Plain and ordinary meaning

Alternatively, if the Court finds that 35 U.S.C. 112, ¶ 6 applies:

Function: controlling packet traffic

Structure: components, circuits and memory, including registers or local memory with the following algorithm:

• Allowing credits to accumulate in a credit bucket over multiple timeslices up to a maximum of the maximum credit limit
• Allocating credits from the credit bucket to packet traffic associated with the credit bucket
• Restricting the allocation of credits from the credit bucket in any single timeslice to the maximum drain rate | 35 U.S.C. § 112, ¶ 6 applies

Functions:
• allowing credits to accumulate in a credit bucket [at a refresh rate] over multiple time-slices up to a maximum credit limit
• allocating credits from said credit bucket to packet traffic that is associated with said credit bucket
• restricting the allocation of credits from said credit bucket in any single timeslice to a maximum drain rate

Structure: Rate control engine includes a credit bucket register 322, a time-slice register 324, a refresh rate register 326, a maximum credit limit register 328, and a maximum drain rate register 330 in Fig. 3 | 35 U.S.C. § 112, ¶ 6 does not apply. Plain-and-ordinary meaning. |

| "characterizing/ characterize *the flow* of packet traffic" (claims 1, 12); "*said* traffic flow" (claim 24)

U.S. Patent No. 7,652,988, Cls. 1, 12, and 24 | Plain and ordinary meaning | No antecedent basis; indefinite | Not indefinite. "the flow" refers back to "packet traffic" |

| "rate control adaptation engine [is] configured to"

U.S. Patent No. 7,652,988, Cls. 24 | Plain and ordinary meaning

Alternatively, if the Court finds that 35 U.S.C. 112, ¶ 6 applies:

Function: characterizing traffic, to select at least one of said refresh rate, said maximum credit limit, and said maximum drain rate in response to said traffic characterization, and adapting the maximum credit limit and the maximum drain rate as a set in response to said characterization of said traffic flow from said traffic characterization engine.

Structure: components, circuits, controllers and memory, including: a settings controller, settings memory and a flow characterization engine with the following algorithm:

• characterizing the flow of an incoming stream of packets, including by distinguishing between | 35 U.S.C. § 112, ¶ 6 applies

Functions:
• characterizing traffic, to select at least one of said refresh rate, said maximum credit limit, and said maximum drain rate in response to said traffic characterization
• adapting the maximum credit limit and the maximum drain rate as a set in response to said characterization of said traffic flow from said traffic characterization engine

Structure: Insufficient structure (no algorithm); indefinite | 35 U.S.C. § 112, ¶ 6 does not apply. Plain-and-ordinary meaning. |

	bursty and smooth traffic; and using the • characterization of traffic flow to determine which rate control settings should be used for the rate control decision. • setting the values for maximum credit limit and maximum drain rate as a group, i.e., (1) setting the value for maximum credit limit and (2) setting the value for maximum drain rate (in any order).		
"said traffic characterization engine" U.S. Patent No. 7,652,988, Cl. 24	Plain and ordinary meaning	No antecedent basis; indefinite.	Indefinite
"determined priority includes minimum performance guarantees" U.S. Patent No. 7,965,726, Cls. 1, 5, 10, 14, and 18	Plain and ordinary meaning	Indefinite	Plain-and-ordinary meaning

"a processor" (claim 1) / "at least one processor and at least one memory storing computer program code" (claim 5) U.S. Patent No. 7,965,726, Cls. 1 and 5	Plain and ordinary meaning Alternatively, if the Court finds that 35 U.S.C. 112, ¶ 6 applies: Function: determining a priority for at least one data packet Structure: a processor with the following algorithm: • determining, by a processor, a priority for at least one packet of data wherein determining the priority of the at least one data packet is based at least on a plurality of quality of service factors, wherein each of the plurality of quality of service factors has a corresponding weighting factor, and the • determined priority includes minimum performance guarantees; • determining a product by multiplying the priority by a traffic priority factor associated with different data traffic types; and	35 U.S.C. § 112, ¶ 6 applies Functions: • determining a priority for at least one data packet • determining a product by multiplying the priority by a traffic priority factor associated with different data traffic types • scheduling transmission of the at least one data packet based at least on the determined product Structure: Insufficient structure (no algorithm); indefinite	35 U.S.C. § 112, ¶ 6 does not apply. Plain-and-ordinary meaning

	• scheduling transmission of the at least one data packet based at least on the determined product.		
"means for determining a priority for at least one data packet, wherein the priority means determines the priority of the data packet based at least on a plurality of quality of service factors, wherein each of the plurality of quality of service factors has a corresponding weighting factor and the determined priority includes minimum performance guarantees" U.S. Patent No. 7,965,726, Cl. 18	Function: determining a priority for at least one data packet Structure: a processor with the following algorithm: • determining a priority for at least one data packet based on a plurality of quality of service factors, wherein each of the plurality of quality of service factors has a corresponding weighting factor and the determined priority includes minimum performance guarantees	35 U.S.C. § 112, ¶ 6 applies Function: • determining a priority for at least one data packet based on a plurality of quality of service factors, wherein each of the plurality of quality of service factors has a corresponding weighting factor and the determined priority includes minimum performance guarantees Structure: Insufficient structure (no algorithm); indefinite.	35 U.S.C. § 112, ¶ 6 applies **Function**: determining a priority for at least one data packet, wherein the priority means determines the priority of the data packet based at least on a plurality of quality of service factors, wherein each of the plurality of quality of service factors has a corresponding weighting factor and the determined priority includes minimum performance guarantees" **Structure**: a processor that executes the algorithm described in 5:18–38.